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Advance Data

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Characteristics of Persons Dying of Diseases of Heart

Preliminary Data From the 1986 National Mortality Followback Survey

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Introduction

More people in the United States die from Diseases of heart than from any other cause. In 1986, a total of 765,490 deaths were assigned to this cause, representing 36 percent of all deaths in the United States (1). Although the death rates for Diseases of heart have steadily declined in recent years, it has remained the leading cause of death for both women and men. Heart disease occurs primarily in people of middle and advanced age. Age-specific death rates from Diseases of heart reflect this: in 1986, rates ranged from 144.6 per 100,000 persons 45–54 years of age to 7,178.7 per 100,000 persons aged 85 or older (2). Data on the sociodemographic and economic characteristics, health care and costs, and health status of persons who died from Diseases of heart in 1986 are presented in this report. These national estimates are from the 1986 National Mortality Followback Survey (NMFS). Characteristics of all decedents included in the 1986 NMFS are presented in a separate Advance Data report.

The 1986 NMFS was a 1-percent stratified random sample of 1986 deaths of adults 25 years of age and over. It was the fifth of the periodic followback surveys on decedents conducted by the National Center for Health Statistics. The four earlier surveys, all conducted in the 1960's, were less comprehensive than the 1986 survey (3–10).

The purpose of the mortality followback surveys is to collect information not typically available from death certificates, thus enabling analysts to explore in much greater detail the characteristics of decedents and circumstances of death. The 1986 NMFS collected detailed information on a nationally representative sample of adult deaths, and provides an opportunity to examine many characteristics thought to be related to heart disease.

According to the Ninth Revision of the International Classification of Diseases, Diseases of heart include the following: Rheumatic fever and rheumatic heart disease (ICD–9 Nos. 390–398), Hypertensive heart disease (ICD–9 No. 402), Hypertensive heart and renal disease (ICD–9 No. 404), Ischemic heart disease (ICD–9 Nos. 410–414), Other diseases of endocardium (ICD–9 No. 424), and All other forms of heart disease (ICD–9 Nos. 415–423, 425–429).

The 1986 NMFS included 3,143 women who died of heart disease and 5,352 women who died from other causes. Weighted, these sample deaths represent 365,428 and 591,692 women decedents, respectively. The survey also included 3,522 men who died of heart disease and 6,716 men who died from other causes, representing 394,003 and 635,745 male decedents, respectively. Information on the weighting of the 1986 NMFS and the sampling variability is presented in the technical notes.

Ischemic heart disease accounts for over two-thirds of all deaths from Diseases of heart. For this reason, in this report this category is shown separately in the tables and is also divided into the two major components of Ischemic heart disease: "Acute myocardial infarction" and "Old myocardial infarction and other forms of chronic ischemic heart disease." However, only the general category consisting of all forms of Diseases of heart is discussed in this text.

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Only substantive responses to the questionnaire items were included in these tables; blank items, a reply of "don't know" or "not applicable," etc. were not included. Nor were items imputed for nonresponse. Thus, the total number of responses varies by questionnaire item and is reflected in the totals for the tables in this report. Not all of the tables include all the estimated 759,431 decedents who died from heart disease.

Sociodemographic and economic characteristics

The largest number of heart disease deaths were to elderly persons. Only 14,760, or 2 percent, of heart disease deaths involved persons under 45 years of age, compared with 431,570 deaths (57 percent) to people 75 years of age and over (table 1). For males, the largest number of heart disease deaths were to men 65–74 years of age, with the number of deaths from this cause declining in the two oldest age groups. This pattern holds for males who were other than black, but not for males who were black. Among black males, the largest number of heart disease deaths occurred in the 45–64 years age group. "Persons other than black" in the 1986 NMFS included, in addition to persons reported as white, those reported as Asian Pacific Islander, Mexican, Puerto Rican, Cuban, all other Caucasians, and American Indian, Eskimo and Aleut. Among females of all races, the number of heart disease deaths increased with increasing age. This pattern also applied to females who were other than black, but the largest number of heart disease deaths among black females were to women 75–84 years of age.

An estimated 257,776 (70 percent) of the women who died from Diseases of heart were aged 75 and older. A larger number of males died from heart disease at earlier ages. An estimated 10,914 (27 percent) of all males who died from heart disease were 25–64 years of age. Only 3,845 (11 percent) of women who died from this cause were 25–64 years of age.

Black persons accounted for 76,680 (10 percent) of the deaths from heart disease. There was little difference in the total number of heart disease deaths by sex.

Only about 8 percent of the decedents who died from heart disease had never been married (table 2). Approximately equal proportions of decedents dying from heart disease were either married or widowed at the time of death. Among those who had been married at some time in their life there were large differences, by sex, in the marital status at the time of death. At the time of death, three times more men than women were married (64 percent of the men versus 21 percent of the women), and three times more women than men were widowed. These differences, by sex, in marital status at time of death, may be due to a combination of factors, including the larger number of heart disease deaths involving younger men compared with women, the shorter life expectancy of men, and the tendency for men to marry younger women.

Over half of all decedents dying from heart disease had less than a high school eduation, more than a fourth had completed high school, and less than a fifth had completed some college (table 3). At educational levels below completion of college, there were only small differences in educational attainment between males and females for either age group. However, for all ages combined, twice as many males (10 percent) as females (5 percent) had completed 4 years of college or more.

At the time of their death, 67,650, or about 17 percent, of the male decedents dying from heart disease were employed, as were 13,240, or only 4 percent of the female decedents. The 1986 NMFS also asked for the decedent's longest held occupation. For males dying of heart disease, "blue collar" occupations were the most frequently mentioned. One-fourth (25 percent) of the men had been operators, fabricators, and laborers, and 23 percent had been in precision production, craft, and repair occupations (table 4). The work experience of females who died of heart disease was somewhat different. One-third (33 percent) had been in technical or sales occupations, about one-fourth (24 percent) had held service occupations, and about one-fifth (21 percent) had been operators, fabricators, and laborers.

Almost one-third (32 percent) of the women who died of heart disease had lived alone or with unrelated persons in 1985, the year prior to their death. Twenty-two percent had lived in a nursing home, other health facility, or institution during this time. Half of the male decedents (51 percent) had lived with one relative (table 5). These living arrangements may reflect the differences in age and marital status of female versus male decedents of heart disease.

The decedent's living arrangements had a direct bearing on his or her 1985 family income, since the reported family income reflects only the decedent's own resources for the 54 percent of women and 27 percent of men who had lived with no relatives. Greater proportions of women who died of heart disease had low incomes compared with men who died of this cause (table 6). Over half (53 percent) of the women had a family income of less than $9,000 in 1985, as had about one-third (35 percent) of the men. At the high end of the income distribution, 16 percent of the women were reported to have had an income of $25,000 or more, compared with 21 percent of the men.

Another measure of the decedents' financial status obtained in the 1986 NMFS concerned the total value of their assets at the time of death. This figure included their home, cash, stocks, bonds, cars, jewelry, and business interests. Almost half (47 percent) of the women who died of heart disease had assets of less than $5,000 at the time of their death (table 7). This is divided evenly between those with no assets and those with $1–4,999 in assets. Another one-fourth (24 percent) had assets of $50,000 or more. Fewer male decedents tended to have little or no assets at death; 15 percent had no assets and

16 percent had between $1 and $4,999. Over one-third (35 percent) of the male decedents had assets of $50,000 or more at death. In general, male decedents tended to have more assets than female decedents.

Health care and costs

Several health care utilization measures and costs were obtained in the 1986 NMFS. One of these involved the number of doctor visits the decedent had during the last year of life (table 8). This did not include doctors seen while an overnight patient in a hospital or other health facility. Sixteen percent of the female decedents who died from heart disease were reported to have had no visits to a doctor in the last year of their life, as were 12 percent of the male decedents. Four percent of the women and 6 percent of the men had visited a doctor only once during the year. For both sexes and all age groups, 5–14 visits was the most frequently mentioned category, which accounted for 37 percent of the doctor visits.

Greater proportions of female decedents who died of heart disease were overnight patients in health facilities during the last year of life than male decedents (table 9). This includes those decedents who died while overnight patients. This is true for hospitals or nursing homes, other health facilities, and home hospice care. The last category, however, was used by only a small percent (4 percent) of heart disease decedents.

Medicare was the major health payment source for 53 percent of the female decedents and 49 percent of the males (table 10). For females, the category self or family and private insurance or HMO's were tied at 14 percent as second and third major payment sources. Twenty-three percent of the male decedents used private insurance or HMO's, and only 12 percent used their own or family funds. For both sexes, the least used source of payment was family members not living with the decedent.

Greater proportions of male than of female decedents spent less of their own money for medical care in the last year of life (table 11). This included money spent by related persons living in the same household. Forty-two percent of the female decedents who died of heart disease spent less than $500, as did 46 percent of the male decedents. At the other extreme, 18 percent of the women spent $5,000 or more of their own money, compared with 11 percent of the males.

Health status

More female decedents than male were reported to have received help from others or used special equipment in walking, eating, bathing, dressing, or using the toilet (table 12). As would be expected, a larger number of decedents 65 years of age and over of both sexes received such assistance compared with the younger decedents. A slightly larger number of female than of male decedents were reported to have received help at home in taking medicines or pills or receiving injections; having bandages changed; or receiving nursing care. Again, the number of such recipients is larger for the older age categories.

Approximately 65 percent of decedents dying from heart disease received no help in daily activities, and about 62 percent received no assistance in medical care in the home (table 13). Among the decedents who received help, family members were the most frequent providers of care. Male decedents who died from Diseases of heart were less likely to have received assistance in daily activities than were female decedents (73 and 55 percent, respectively) and were also less likely to have received help in medical care (67 compared with 55 percent). Although family members were more likely to provide care than nonrelatives for both male and female decedents, nonrelatives were more likely to be the sole care providers for female decedents than for male decedents.

In addition to heart disease, many of these decedents had other serious health problems. These other diseases and conditions included high blood pressure, stroke, angina pectoris, diabetes, cancer, asthma, and other lung conditions (table 14). Female decedents who died of heart disease were reported to have most of these diseases and conditions more often than were males. The exceptions were angina pectoris and other lung conditions.

Information on familial history of heart disease was also collected by means of the 1986 NMFS. An estimated 61 percent of the decedents dying from Diseases of heart had at least one family member who had experienced a heart attack (table 15). Approximately 38 percent of the decedents who died of heart disease had only one relative with a history of one or more heart attacks. Another 23 percent of the decedents had two or more relatives who had experienced a heart attack. There was little difference by sex in the proportion of decedents who had a familial history of heart attacks.

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Symbols

- - -	Data not available
. . .	Category not applicable
-	Quantity zero
0.0	Quantity more than zero but less than 0.05
Z	Quantity more than zero but less than 500 where numbers are rounded to thousands
*	Estimate based on fewer than 30 sample deaths and does not meet standards of reliability or precision
#	Figure suppressed to comply with confidentiality requirements

Table 1. Number and percent distribution of heart disease decedents by race, according to age, sex, and selected forms of heart disease: United States, 1986

Cause of death, sex, and race	All ages	25–45 years	45–64 years	65–74 years	75–84 years	85 years and over	All ages	25–45 years	45–64 years	65–74 years	75–84 years	85 years and over
	Number						Percent distribution					
All diseases of heart[1]												
Both sexes:												
All races	759,431	14,760	128,562	184,539	234,827	196,743	100.0	100.0	100.0	100.0	100.0	100.0
Black	76,680	4,078	20,924	19,464	20,367	11,848	10.1	27.6	16.3	10.5	8.7	6.0
All other	682,751	10,682	107,638	165,076	214,460	184,896	89.9	72.4	83.7	89.5	91.3	94.0
Male:												
All races	394,003	10,914	93,631	115,664	113,173	60,622	100.0	100.0	100.0	100.0	100.0	100.0
Black	38,423	2,667	12,817	9,913	9,012	4,009	9.8	24.4	13.7	8.6	8.0	6.6
All other	355,581	8,247	80,814	105,746	104,161	56,613	90.2	75.6	86.3	91.4	92.0	93.4
Female:												
All races	365,428	3,845	34,931	68,875	121,654	136,122	100.0	100.0	100.0	100.0	100.0	100.0
Black	38,258	1,411	8,107	9,545	11,355	7,839	10.5	36.7	23.2	13.9	9.3	5.8
All other	327,170	2,434	26,824	59,330	110,299	128,283	89.5	63.3	76.8	86.1	90.7	94.2
Ischemic												
Both sexes:												
All races	525,311	8,316	89,335	128,474	166,169	133,017	100.0	100.0	100.0	100.0	100.0	100.0
Black	42,396	1,563	11,165	11,030	11,191	7,447	8.1	18.8	12.5	8.6	6.7	5.6
All other	482,915	6,753	78,170	117,443	154,978	125,571	91.9	81.2	87.5	91.4	93.3	94.4
Male:												
All races	282,924	6,804	68,564	81,889	81,259	44,407	100.0	100.0	100.0	100.0	100.0	100.0
Black	21,739	1,154	7,508	5,913	4,651	2,513	7.7	17.0	11.0	7.2	5.7	5.7
All other	261,185	5,651	61,056	75,976	76,608	41,894	92.3	83.0	89.0	92.8	94.3	94.3
Female:												
All races	242,387	1,512	20,771	46,585	84,910	88,610	100.0	100.0	100.0	100.0	100.0	100.0
Black	20,657	409	3,657	5,118	6,540	4,934	8.5	27.1	17.6	11.0	7.7	5.6
All other	221,731	1,102	17,114	41,467	78,371	83,676	91.5	72.9	82.4	89.0	92.3	94.4
Acute myocardial infarction												
Both sexes:												
All races	257,310	5,182	50,022	75,894	83,274	42,937	100.0	100.0	100.0	100.0	100.0	100.0
Black	21,846	914	6,839	6,245	5,361	2,487	8.5	17.6	13.7	8.2	6.4	5.8
All other	235,464	4,269	43,183	69,650	77,913	40,449	91.5	82.4	86.3	91.8	93.6	94.2
Male:												
All races	149,690	4,293	37,916	48,980	42,925	15,576	100.0	100.0	100.0	100.0	100.0	100.0
Black	11,864	681	4,764	3,370	2,151	*897	7.9	15.9	12.6	6.9	5.0	*5.8
All other	137,826	3,612	33,151	45,610	40,774	14,679	92.1	84.1	87.4	93.1	95.0	94.2
Female:												
All races	107,620	889	12,106	26,915	40,349	27,361	100.0	100.0	100.0	100.0	100.0	100.0
Black	9,982	*233	2,075	2,875	3,210	1,590	9.3	*26.1	17.1	10.7	8.0	5.8
All other	97,638	657	10,032	24,040	37,139	25,771	90.7	73.9	82.9	89.3	92.0	94.2
Other ischemic, old myocardial infarction												
Both sexes:												
All races	262,473	2,985	37,690	51,126	81,178	89,494	100.0	100.0	100.0	100.0	100.0	100.0
Black	20,199	624	4,243	4,601	5,771	4,959	7.7	20.9	11.3	9.0	7.1	5.5
All other	242,274	2,361	33,447	46,525	75,407	84,535	92.3	79.1	88.7	91.0	92.9	94.5
Male:												
All races	129,199	2,407	29,171	31,928	37,449	28,244	100.0	100.0	100.0	100.0	100.0	100.0
Black	9,665	448	2,744	2,416	2,442	*1,615	7.5	18.6	9.4	7.6	6.5	*5.7
All other	119,535	1,960	26,428	29,512	35,007	26,629	92.5	81.4	90.6	92.4	93.5	94.3
Female:												
All races	133,274	578	8,519	19,199	43,729	61,250	100.0	100.0	100.0	100.0	100.0	100.0
Black	10,534	*177	1,499	2,185	3,329	3,344	7.9	*30.6	17.6	11.4	7.6	5.5
All other	122,740	401	7,020	17,014	40,400	57,906	92.1	69.4	82.4	88.6	92.4	94.5

[1]Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 2. Number and percent distribution of heart disease decedents by marital status, according to sex and selected forms of heart disease: United States, 1986

Cause of death and marital status	Both sexes	Male	Female	Both sexes	Male	Female
	Number			Percent distribution		
All forms of heart disease[1]						
All marital statuses	745,225	386,117	359,108	100.0	100.0	100.0
Married	320,960	247,240	73,720	43.1	64.0	20.5
Widowed	305,324	73,636	231,688	41.0	19.1	64.5
Divorced or separated	63,333	36,394	26,939	8.5	9.4	7.5
Never married	55,608	28,847	26,761	7.5	7.5	7.5
Ischemic						
All marital statuses	514,717	277,134	237,583	100.0	100.0	100.0
Married	232,028	182,089	49,939	45.1	65.7	21.0
Widowed	204,377	51,070	153,307	39.7	18.4	64.5
Divorced or separated	40,227	23,265	16,961	7.8	8.4	7.1
Never married	38,085	20,709	17,376	7.4	7.5	7.3
Acute myocardial infarction						
All marital statuses	251,645	146,445	105,200	100.0	100.0	100.0
Married	124,910	100,020	24,890	49.6	68.3	23.7
Widowed	86,560	21,971	64,589	34.4	15.0	61.4
Divorced or separated	21,759	13,291	8,468	8.6	9.1	8.0
Never married	18,417	11,163	7,253	7.3	7.6	6.9
Other ischemic, old myocardial infarction						
All marital statuses	257,819	126,929	130,889	100.0	100.0	100.0
Married	103,800	79,516	24,284	40.3	62.6	18.6
Widowed	116,213	28,188	88,026	45.1	22.2	67.3
Divorced or separated	18,388	9,931	8,457	7.1	7.8	6.5
Never married	19,418	9,295	10,123	7.5	7.3	7.7

[1] Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 3. Number and percent distribution of heart disease decedents by level of education, according to age, sex, and selected forms of heart disease: United States, 1985

Cause of death, sex, and level of education	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
	Number			Percent distribution		
All forms of heart disease[1]						
Both sexes:						
All levels of education	699,778	134,839	564,939	100.0	100.0	100.0
Less than high school	386,295	59,427	326,868	55.2	44.1	57.9
High school	190,516	47,357	143,161	27.2	35.1	25.3
1–3 years of college	68,667	14,486	54,181	9.8	10.7	9.6
4 years of college or more	54,298	13,569	40,729	7.8	10.1	7.2
Male:						
All levels of education	366,900	98,649	268,251	100.0	100.0	100.0
Less than high school	198,443	44,843	153,601	54.1	45.5	57.3
High school	95,248	31,497	63,751	26.0	31.9	23.8
1–3 years of college	35,783	10,712	25,071	9.8	10.9	9.3
4 years of college or more	37,427	11,598	25,829	10.2	11.8	9.6
Female:						
All levels of education	332,878	36,190	296,688	100.0	100.0	100.0
Less than high school	187,852	14,585	173,268	56.4	40.3	58.4
High school	95,270	15,861	79,410	28.6	43.8	26.8
1–3 years of college	32,884	3,774	29,110	9.9	10.4	9.8
4 years of college or more	16,872	1,971	14,900	5.1	5.4	5.0
Ischemic						
Both sexes:						
All levels of education	483,696	91,705	391,991	100.0	100.0	100.0
Less than high school	262,094	38,303	223,791	54.2	41.8	57.1
High school	137,061	33,050	104,011	28.3	36.0	26.5
1–3 years of college	46,172	9,989	36,183	9.5	10.9	9.2
4 years of college or more	38,368	10,363	28,006	7.9	11.3	7.1
Male:						
All levels of education	264,280	70,778	193,502	100.0	100.0	100.0
Less than high school	138,717	30,304	108,413	52.5	42.8	56.0
High school	71,384	24,053	47,331	27.0	34.0	24.5
1–3 years of college	25,904	7,406	18,497	9.8	10.5	9.6
4 years of college or more	28,275	9,014	19,261	10.7	12.7	10.0
Female:						
All levels of education	219,416	20,927	198,489	100.0	100.0	100.0
Less than high school	123,377	7,999	115,378	56.2	38.2	58.1
High school	65,677	8,997	56,680	29.9	43.0	28.6
1–3 years of college	20,268	2,582	17,686	9.2	12.3	8.9
4 years of college or more	10,094	*1,348	8,745	4.6	*6.4	4.4
Acute myocardial infarction						
Both sexes:						
All levels of education	238,456	52,201	186,255	100.0	100.0	100.0
Less than high school	127,557	22,565	104,992	53.5	43.2	56.4
High school	68,802	18,269	50,533	28.9	35.0	27.1
1–3 years of college	23,684	6,048	17,636	9.9	11.6	9.5
4 years of college or more	18,413	5,319	13,094	7.7	10.2	7.0
Male:						
All levels of education	140,499	40,041	100,459	100.0	100.0	100.0
Less than high school	72,525	18,142	54,382	51.6	45.3	54.1
High school	40,063	13,515	26,548	28.5	33.8	26.4
1–3 years of college	14,000	4,027	9,973	10.0	10.1	9.9
4 years of college or more	13,912	4,356	9,555	9.9	10.9	9.5
Female:						
All levels of education	97,956	12,160	85,796	100.0	100.0	100.0
Less than high school	55,032	4,422	50,610	56.2	36.4	59.0
High school	28,739	4,754	23,985	29.3	39.1	28.0
1–3 years of college	9,684	2,021	7,663	9.9	16.6	8.9
4 years of college or more	4,502	*963	3,539	4.6	*7.9	4.1

See footnotes at end of table.

Table 3. Number and percent distribution of heart disease decedents by level of education, according to age, sex, and selected forms heart disease: United States, 1986—Con.

Cause of death, sex, and level of education	All ages	25–64 years	65 years and over	All ages	25–64 years	65 ye and o
Other ischemic, old myocardial infarction	Number			Percent distribution		
Both sexes:						
All levels of education	240,343	37,950	202,393	100.0	100.0	100.
Less than high school	132,344	14,952	117,392	55.1	39.4	58.
High school	65,826	14,070	51,756	27.4	37.1	25.
1–3 years of college	22,252	3,918	18,334	9.3	10.3	9.
4 years of college or more	19,921	5,010	14,911	8.3	13.2	7.
Male:						
All levels of education	120,377	29,374	91,003	100.0	100.0	100.
Less than high school	64,812	11,507	53,304	53.8	39.2	58.
High school	29,558	9,875	19,683	24.6	33.6	21.
1–3 years of college	11,667	3,357	8,311	9.7	11.4	9.
4 years of college or more	14,340	4,635	9,705	11.9	15.8	10.
Female:						
All levels of education	119,966	8,576	111,390	100.0	100.0	100.
Less than high school	67,533	3,445	64,088	56.3	40.2	57.
High school	36,268	4,196	32,073	30.2	48.9	28.
1–3 years of college	10,584	561	10,023	8.8	6.5	9.
4 years of college or more	5,581	*375	5,206	4.7	*4.4	4.

[1] Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 4. Number and percent distribution of heart disease decedents by occupation, according to sex and selected forms of heart disease: United States, 1986

Cause of death and occupation	Both sexes	Male	Female	Both sexes	Male	Female
All forms of heart disease[1]	Number			Percent distribution		
All occupations	631,002	366,600	264,403	100.0	100.0	100.0
Managerial or professional	98,371	61,376	36,995	15.6	16.7	14.0
Technical or sales	144,755	57,896	86,859	22.9	15.8	32.9
Services	86,852	22,286	64,566	13.8	6.1	24.4
Precison production	92,512	82,340	10,171	14.7	22.5	3.8
Operator	148,492	92,413	56,079	23.5	25.2	21.2
Farm	51,631	42,175	9,456	8.2	11.5	3.6
Armed forces	8,390	8,113	*277	1.3	2.2	*0.1
Ischemic						
All occupations	440,033	265,577	174,456	100.0	100.0	100.0
Managerial or professional	70,127	46,932	23,195	15.9	17.7	13.3
Technical or sales	102,536	42,164	60,372	23.3	15.9	34.6
Services	54,742	15,574	39,169	12.4	5.9	22.5
Precison production	67,61[illegible]	60,753	6,857	15.4	22.9	3.9
Operator	104,40[illegible]	67,089	37,315	23.7	25.3	21.4
Farm	35,022	27,692	7,330	8.0	10.4	4.2
Armed forces	5,592	5,373	*219	1.3	2.0	*0.1
Acute myocardial infarction						
All occupations	222,164	140,330	81,834	100.0	100.0	100.0
Managerial or professional	35,274	25,366	9,907	15.9	18.1	12.1
Technical or sales	49,750	21,879	27,871	22.4	15.6	34.1
Services	23,629	7,006	16,623	10.6	5.0	20.3
Precison production	33,230	30,351	*2,379	15.0	22.0	*2.9
Operator	59,614	38,171	21,474	26.8	27.2	26.2
Farm	17,919	14,546	3,373	8.1	10.4	4.1
Armed forces	*2,718	*2,511	*207	*1.2	*1.8	*0.3
Other ischemic, old myocardial infarction						
All occupations	213,336	121,758	91,578	100.0	100.0	100.0
Managerial or professional	34,190	21,122	13,068	16.0	17.3	14.3
Technical or sales	51,664	19,796	31,867	24.2	16.3	34.8
Services	30,765	8,314	22,452	14.4	6.8	24.5
Precison production	33,719	29,242	4,477	15.8	24.0	4.9
Operator	43,864	28,109	15,755	20.6	23.1	17.2
Farm	16,477	12,530	*3,946	7.7	10.3	*4.3
Armed forces	*2,658	*2,645	*13	*1.2	*2.2	*0.0

[1] Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 5. Number and percent distribution of heart disease decedents by living arrangement, according to age, sex, and selected forms of heart disease: United States, 1986

Cause of death, sex, and living arrangement	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
	Number			Percent distribution		
All forms of heart disease[1]						
Both sexes:						
All living arrangements	727,488	137,750	589,738	100.0	100.0	100.0
Institutionalized	103,987	2,438	101,549	14.3	1.8	17.2
Lived alone	184,845	26,126	158,718	25.4	19.0	26.9
Lived with 1 relative	283,828	55,298	228,530	39.0	40.1	38.8
Lived with 2 or more relatives	154,829	53,888	100,942	21.3	39.1	17.1
Male:						
All living arrangements	379,413	100,339	279,074	100.0	100.0	100.0
Institutionalized	28,623	*1,298	27,325	7.5	*1.3	9.8
Lived alone	73,884	19,147	54,737	19.5	19.1	19.6
Lived with 1 relative	192,498	41,251	151,248	50.7	41.1	54.2
Lived with 2 or more relatives	84,408	38,643	45,765	22.2	38.5	16.4
Female:						
All living arrangements	348,075	37,411	310,664	100.0	100.0	100.0
Institutionalized	75,364	*1,140	74,224	21.7	*3.0	23.9
Lived alone	110,960	6,979	103,981	31.9	18.7	33.5
Lived with 1 relative	91,330	14,047	77,282	26.2	37.5	24.9
Lived with 2 or more relatives	70,421	15,244	55,177	20.2	40.7	17.8
Ischemic						
Both sexes:						
All living arrangements	502,000	93,949	408,051	100.0	100.0	100.0
Institutionalized	67,357	1,214	66,143	13.4	1.3	16.2
Lived alone	123,255	17,360	105,895	24.6	18.5	26.0
Lived with 1 relative	206,217	39,827	166,391	41.1	42.4	40.8
Lived with 2 or more relatives	105,170	35,548	69,622	21.0	37.8	17.1
Male:						
All living arrangements	272,244	72,344	199,901	100.0	100.0	100.0
Institutionalized	18,869	*976	17,893	6.9	*1.3	9.0
Lived alone	50,219	13,680	36,539	18.4	18.9	18.3
Lived with 1 relative	143,043	30,224	112,819	52.5	41.8	56.4
Lived with 2 or more relatives	60,114	27,464	32,650	22.1	38.0	16.3
Female:						
All living arrangements	229,756	21,606	208,150	100.0	100.0	100.0
Institutionalized	48,489	*238	48,251	21.1	*1.1	23.2
Lived alone	73,036	3,680	69,356	31.8	17.0	33.3
Lived with 1 relative	63,175	9,603	53,572	27.5	44.4	25.7
Lived with 2 or more relatives	45,056	8,084	36,972	19.6	37.4	17.8
Acute myocardial infarction						
Both sexes:						
All living arrangements	248,726	53,638	195,088	100.0	100.0	100.0
Institutionalized	21,443	*177	21,266	8.6	*0.3	10.9
Lived alone	61,718	9,665	52,053	24.8	18.0	26.7
Lived with 1 relative	110,642	21,585	89,057	44.5	40.2	45.6
Lived with 2 or more relatives	54,923	22,211	32,712	22.1	41.4	16.8
Male:						
All living arrangements	144,489	40,810	103,679	100.0	100.0	100.0
Institutionalized	5,454	*94	5,360	3.8	*0.2	5.2
Lived alone	25,886	8,091	17,795	17.9	19.8	17.2
Lived with 1 relative	78,325	15,671	62,654	54.2	38.4	60.4
Lived with 2 or more relatives	34,824	16,954	17,869	24.1	41.5	17.2
Female:						
All living arrangements	104,237	12,828	91,409	100.0	100.0	100.0
Institutionalized	15,989	*83	15,906	15.3	*0.6	17.4
Lived alone	35,832	1,573	34,258	34.4	12.3	37.5
Lived with 1 relative	32,317	5,915	26,402	31.0	46.1	28.9
Lived with 2 or more relatives	20,099	5,257	14,843	19.3	41.0	16.2

See footnotes at end of table.

Table 5. Number and percent distribution of heart disease decedents by living arrangement, according to age, sex, and selected forms of heart disease: United States, 1986—Con.

Cause of death, sex, and living arrangement	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
Other ischemic, old myocardial infarction	Number			Percent distribution		
Both sexes:						
All living arrangements	247,963	38,757	209,207	100.0	100.0	100.0
Institutionalized	45,650	*1,037	44,613	18.4	*2.7	21.3
Lived alone	59,944	6,985	52,959	24.2	18.0	25.3
Lived with 1 relative	93,066	17,726	75,340	37.5	45.7	36.0
Lived with 2 or more relatives	49,303	13,009	36,295	19.9	33.6	17.3
Male:						
All living arrangements	123,938	30,169	93,769	100.0	100.0	100.0
Institutionalized	13,208	*882	12,326	10.7	*2.9	13.1
Lived alone	23,387	4,902	18,485	18.9	16.2	19.7
Lived with 1 relative	62,879	14,086	48,793	50.7	46.7	52.0
Lived with 2 or more relatives	24,464	10,299	14,165	19.7	34.1	15.1
Female:						
All living arrangements	124,026	8,588	115,438	100.0	100.0	100.0
Institutionalized	32,442	*155	32,287	26.2	*1.8	28.0
Lived alone	36,557	2,083	34,474	29.5	24.3	29.9
Lived with 1 relative	30,187	3,640	26,548	24.3	42.4	23.0
Lived with 2 or more relatives	24,839	2,710	22,129	20.0	31.6	19.2

[1]Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 6. Number and percent distribution of heart disease decedents by family income, according to age, sex, and selected forms of heart disease: United States, 1986

Cause of death, sex, and family income	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
	Number			Percent distribution		
All forms of heart disease[1]						
Both sexes:						
All family income	586,197	111,705	474,492	100.0	100.0	100.0
Under $5,000	127,177	15,960	111,217	21.7	14.3	23.4
$5,000–$8,999	130,496	15,026	115,470	22.3	13.5	24.3
$9,000–$24,999	222,076	46,027	176,049	37.9	41.2	37.1
$25,000 or more	106,448	34,692	71,756	18.2	31.1	15.1
Male:						
All family income	305,661	80,128	225,532	100.0	100.0	100.0
Under $5,000	44,578	8,327	36,251	14.6	10.4	16.1
$5,000–$8,999	63,478	11,317	52,161	20.8	14.1	23.1
$9,000–$24,999	134,567	33,610	100,958	44.0	41.9	44.8
$25,000 or more	63,038	26,874	36,163	20.6	33.5	16.0
Female:						
All family income	280,536	31,577	248,959	100.0	100.0	100.0
Under $5,000	82,599	7,633	74,966	29.4	24.2	30.1
$5,000–$8,999	67,018	3,709	63,309	23.9	11.7	25.4
$9,000–$24,999	87,509	12,417	75,092	31.2	39.3	30.2
$25,000 or more	43,410	7,818	35,592	15.5	24.8	14.3
Ischemic:						
Both sexes:						
All family income	404,036	76,431	327,605	100.0	100.0	100.0
Under $5,000	81,656	9,013	72,643	20.2	11.8	22.2
$5,000–$8,999	87,816	9,374	78,441	21.7	12.3	23.9
$9,000–$24,999	154,388	31,357	123,030	38.2	41.0	37.6
$25,000 or more	80,176	26,687	53,490	19.8	34.9	16.3
Male:						
All family income	219,424	58,072	161,351	100.0	100.0	100.0
Under $5,000	29,508	5,402	24,106	13.4	9.3	14.9
$5,000–$8,999	44,994	7,393	37,601	20.5	12.7	23.3
$9,000–$24,999	96,043	24,140	71,903	43.8	41.6	44.6
$25,000 or more	48,878	21,137	27,741	22.3	36.4	17.2
Female:						
All family income	184,612	18,359	166,253	100.0	100.0	100.0
Under $5,000	52,148	3,612	48,537	28.2	19.7	29.2
$5,000–$8,999	42,821	1,981	40,841	23.2	10.8	24.6
$9,000–$24,999	58,345	7,217	51,127	31.6	39.3	30.8
$25,000 or more	31,298	5,549	25,748	17.0	30.2	15.5
Acute myocardial infarction:						
Both sexes:						
All family income	199,019	44,227	154,792	100.0	100.0	100.0
Under $5,000	34,052	5,112	28,941	17.1	11.6	18.7
$5,000–$8,999	42,510	5,767	36,743	21.4	13.0	23.7
$9,000–$24,999	81,464	18,990	62,474	40.9	42.9	40.4
$25,000 or more	40,993	14,357	26,636	20.6	32.5	17.2
Male:						
All family income	115,095	33,312	81,783	100.0	100.0	100.0
Under $5,000	14,377	3,255	11,122	12.5	9.8	13.6
$5,000–$8,999	20,298	4,579	15,719	17.6	13.7	19.2
$9,000–$24,999	54,304	14,377	39,926	47.2	43.2	48.8
$25,000 or more	26,116	11,100	15,016	22.7	33.3	18.4
Female:						
All family income	83,925	10,915	73,009	100.0	100.0	100.0
Under $5,000	19,675	1,857	17,819	23.4	17.0	24.4
$5,000–$8,999	22,212	1,188	21,024	26.5	10.9	28.8
$9,000–$24,999	27,160	4,613	22,547	32.4	42.3	30.9
$25,000 or more	14,877	3,258	11,619	17.7	29.8	15.9

See footnotes at end of table.

Table 6. Number and percent distribution of heart disease decedents by family income, according to age, sex, and selected forms of heart disease: United States, 1986—Con.

Cause of death, sex, and family income	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
Other ischemic, old myocardial infarction	Number			Percent distribution		
Both sexes:						
All family income	201,265	31,132	170,133	100.0	100.0	100.0
Under $5,000	47,412	3,767	43,645	23.6	12.1	25.7
$5,000–$8,999	44,609	3,596	41,014	22.2	11.6	24.1
$9,000–$24,999	70,690	11,862	58,828	35.1	38.1	34.6
$25,000 or more	38,553	11,907	26,646	19.2	38.2	15.7
Male:						
All family income	101,851	23,867	77,984	100.0	100.0	100.0
Under $5,000	15,022	2,038	12,984	14.7	8.5	16.6
$5,000–$8,999	24,219	2,814	21,405	23.8	11.8	27.4
$9,000–$24,999	40,175	9,305	30,870	39.4	39.0	39.6
$25,000 or more	22,435	9,711	12,725	22.0	40.7	16.3
Female:						
All family income	99,413	7,265	92,149	100.0	100.0	100.0
Under $5,000	32,390	1,730	30,661	32.6	23.8	33.3
$5,000–$8,999	20,390	782	19,608	20.5	10.8	21.3
$9,000–$24,999	30,515	2,557	27,958	30.7	35.2	30.3
$25,000 or more	16,118	2,196	13,921	16.2	30.2	15.1

[1] Includes other categories of Disease of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 7. Number and percent distribution of heart disease decedents by assets, according to age, sex, and selected forms of heart disease: United States, 1986

Cause of death, sex, and family assets	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
	Number			Percent distribution		
All forms of heart disease[1]						
Both sexes	613,890	116,265	497,625	100.0	100.0	100.0
All assets	116,966	19,805	97,162	19.1	17.0	19.5
None	119,740	20,872	98,868	19.5	18.0	19.9
$1–$4,999	100,598	20,050	80,548	16.4	17.2	16.2
$5,000–$24,999	94,031	17,677	76,354	15.3	15.2	15.3
$25,000–$49,999	182,554	37,861	144,693	29.7	32.6	29.1
$50,000 or more						
Male	312,169	83,819	228,350	100.0	100.0	100.0
All assets	46,964	14,308	32,656	15.0	17.1	14.3
None	48,594	14,235	34,359	15.6	17.0	15.0
$1–$4,999	53,405	15,174	38,232	17.1	18.1	16.7
$5,000–$24,999	53,915	11,854	42,061	17.3	14.1	18.4
$25,000–$49,999	109,291	28,248	81,043	35.0	33.7	35.5
$50,000 or more						
Female	301,720	32,446	269,275	100.0	100.0	100.0
All assets	70,003	5,497	64,506	27.2	16.9	24.0
None	71,146	5,637	64,509	23.6	20.5	24.0
$1–$4,999	47,193	4,877	42,316	15.6	15.0	15.7
$5,000–$24,999	40,116	5,823	34,293	13.3	17.9	12.7
$25,000–$49,999	73,263	9,612	63,651	24.3	29.6	23.6
$50,000 or more						
Ischemic						
Both sexes	418,856	78,513	340,345	100.0	100.0	100.0
All assets	73,712	11,687	62,024	17.6	14.9	18.2
None	78,259	13,200	65,059	18.7	16.8	19.1
$1–$4,999	70,843	14,001	56,842	16.9	17.8	16.7
$5,000–$24,999	62,456	11,458	50,998	14.9	14.6	15.0
$25,000–$49,999	133,586	28,166	105,422	31.9	35.9	31.0
$50,000 or more						
Male	221,187	59,889	161,298	100.0	100.0	100.0
All assets	30,227	9,057	21,180	13.7	15.1	13.1
None	32,735	9,815	22,920	14.8	16.4	14.2
$1–$4,999	38,850	11,481	27,369	17.6	19.2	17.0
$5,000–$24,999	36,780	8,151	28,628	16.6	13.6	17.7
$25,000–$49,999	82,596	21,385	61,201	37.3	35.7	37.9
$50,000 or more						
Female	197,671	18,623	179,048	100.0	100.0	100.0
All assets	43,475	2,631	40,845	22.0	14.1	22.8
None	45,524	3,385	42,139	23.0	18.2	23.5
$1–$4,999	31,994	2,521	29,473	16.2	13.5	16.5
$5,000–$24,999	25,676	3,306	22,370	13.0	17.8	12.5
$25,000–$49,999	51,002	6,781	44,221	25.8	36.4	24.7
$50,000 or more						
Acute myocardial infarction						
Both sexes	203,504	44,715	158,789	100.0	100.0	100.0
All assets	30,244	6,165	24,080	14.9	13.8	15.2
None	36,555	7,641	28,914	18.0	17.1	18.2
$1–$4,999	36,732	7,468	29,264	18.0	16.7	18.4
$5,000–$24,999	32,743	7,584	25,159	16.1	17.0	15.8
$25,000–$49,999	67,229	15,857	51,372	33.0	35.5	32.4
$50,000 or more						
Male	116,505	33,598	82,907	100.0	100.0	100.0
All assets	14,473	4,707	9,765	12.4	14.0	11.8
None	17,492	5,586	11,906	15.0	16.6	14.4
$1–$4,999	20,295	6,051	14,244	17.4	18.0	17.2
$5,000–$24,999	19,598	5,588	14,009	16.8	16.6	16.9
$25,000–$49,999	44,648	11,666	32,982	38.3	34.7	39.8
$50,000 or more						
Female	86,999	11,117	75,883	100.0	100.0	100.0
All assets	15,772	1,457	14,314	18.1	13.1	18.9
None	19,063	2,055	17,008	21.9	18.5	22.4
$1–$4,999	16,437	1,417	15,020	18.9	12.8	19.8
$5,000–$24,999	13,146	1,996	11,150	15.1	18.0	14.7
$25,000–$49,999	22,581	4,191	18,390	26.0	37.7	24.2
$50,000 or more						

See footnotes at end of table.

Table 7. Number and percent distribution of heart disease decedents by assets, according to age, sex, and selected forms of heart disease: United States, 1986—Con.

Cause of death, sex, and family assets	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
Other ischemic, old myocardial infarction	Number			Percent distribution		
Both sexes:						
All assets	211,154	32,473	178,681	100.0	100.0	100.0
None	43,076	5,402	37,673	20.4	16.6	21.1
$1–$4,999	40,953	5,223	35,730	19.4	16.1	20.0
$5,000–$24,999	33,177	6,065	27,112	15.7	18.7	15.2
$25,000–$49,999	28,950	3,596	25,354	13.7	11.1	14.2
$50,000 or more	65,000	12,187	52,812	30.8	37.5	29.6
Male:						
All assets	101,768	25,156	76,611	100.0	100.0	100.0
None	15,441	4,240	11,201	15.2	16.9	14.6
$1–$4,999	14,784	3,977	10,807	14.5	15.8	14.1
$5,000–$24,999	17,838	4,972	12,866	17.5	19.8	16.8
$25,000–$49,999	16,688	2,346	14,342	16.4	9.3	18.7
$50,000 or more	37,017	9,621	27,396	36.4	38.2	35.8
Female:						
All assets	109,386	7,316	102,070	100.0	100.0	100.0
None	27,635	1,162	26,473	25.3	15.9	25.9
$1–$4,999	26,169	1,246	24,923	23.9	17.0	24.4
$5,000–$24,999	15,338	1,092	14,246	14.0	14.9	14.0
$25,000–$49,999	12,262	*1,249	11,012	11.2	*17.1	10.8
$50,000 or more	27,983	2,566	25,416	25.6	35.1	24.9

*Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 8. Number and percent distribution of heart disease decedents by number of doctor visits during the year preceding death, according to age, sex, and selected forms of heart disease: United States, 1986

Cause of death, sex, and number of doctor visits	All ages	25–64 years	65 years and over	All ages	25–64 years	6 a
	Number			Percent distribution		
All forms of heart disease[1]						
Both sexes:						
All visits	701,815	131,822	569,993	100.0	100.0	
No visits	96,674	14,943	81,731	13.8	11.3	
1 visit	36,183	10,775	25,408	5.2	8.2	
2–4 visits	151,464	32,649	118,816	21.6	24.8	
5–14 visits	261,088	41,140	219,948	37.2	31.2	
15 visits or more	156,405	32,315	124,090	22.3	24.5	
Male:						
All visits	364,930	95,638	269,292	100.0	100.0	
No visits	41,926	12,224	29,702	11.5	12.8	
1 visit	22,926	9,330	13,597	6.3	9.8	
2–4 visits	89,140	25,754	63,387	24.4	26.9	
5–14 visits	135,369	27,999	107,371	37.1	29.3	
15 visits or more	75,568	20,332	55,237	20.7	21.3	
Female:						
All visits	336,884	36,184	300,700	100.0	100.0	
No visits	54,748	2,719	52,029	16.3	7.5	
1 visit	13,257	1,445	11,812	3.9	4.0	
2–4 visits	62,324	6,895	55,429	18.5	19.1	
5–14 visits	125,719	13,142	112,577	37.3	36.3	
15 visits or more	80,837	11,984	68,853	24.0	33.1	
Ischemic						
Both sexes:						
All visits	488,664	91,065	397,599	100.0	100.0	
No visits	64,880	9,605	55,275	13.3	10.5	
1 visit	25,522	9,185	16,337	5.2	10.1	
2–4 visits	108,054	24,720	83,334	22.1	27.1	
5–14 visits	184,659	27,612	157,047	37.8	30.3	
15 visits or more	105,548	19,942	85,606	21.6	21.9	
Male:						
All visits	263,654	69,590	194,065	100.0	100.0	
No visits	28,596	7,941	20,655	10.8	11.4	
1 visit	17,125	8,045	9,080	6.5	11.6	
2–4 visits	68,365	20,817	47,548	25.9	29.9	
5–14 visits	96,706	19,634	77,072	36.7	28.2	
5 visits or more	52,863	13,153	39,710	20.1	18.9	
Female:						
All visits	225,010	21,475	203,534	100.0	100.0	
No visits	36,285	1,664	34,620	16.1	7.8	
1 visit	8,397	1,141	7,256	3.7	5.3	
2–4 visits	39,690	3,903	35,787	17.6	18.2	
5–14 visits	87,953	7,978	79,975	39.1	37.2	
15 visits or more	52,685	6,789	45,896	23.4	31.6	
Acute myocardial infarction						
Both sexes:						
All visits	238,879	52,134	186,745	100.0	100.0	
No visits	25,002	4,737	20,265	10.5	9.1	
1 visit	12,539	4,670	7,869	5.2	9.0	
2–4 visits	63,088	16,000	47,088	26.4	30.7	
5–14 visits	90,945	16,639	74,306	38.1	31.9	
5 visits or more	47,304	10,088	37,217	19.8	19.3	
Male:						
All visits	140,032	39,554	100,478	100.0	100.0	
No visits	14,676	4,103	10,573	10.5	10.4	
1 visit	8,733	3,868	*4,865	6.2	9.8	
2–4 visits	40,948	12,994	27,955	29.2	32.9	
5–14 visits	50,075	11,674	38,401	35.8	29.5	
5 visits or more	25,600	6,915	18,685	18.3	17.5	
Female:						
All visits	98,847	12,580	86,267	100.0	100.0	
No visits	10,326	*634	9,692	10.4	*5.0	
1 visit	3,806	*802	*3,004	3.9	*6.4	
2–4 visits	22,140	3,006	19,134	22.4	23.9	
5–14 visits	40,871	4,965	35,906	41.3	39.5	
5 visits or more	21,704	3,173	18,531	22.0	25.2	

See footnotes at end of table.

Table 8. Number and percent distribution of heart disease decedents by number of doctor visits during the year preceding death, according to age, sex, and selected forms of heart disease: United States, 1986—Con.

Cause of death, sex, and number of doctor visits	*All ages*	*25–64 years*	*65 years and over*	*All ages*	*25–64 years*	*65 years and over*
Other ischemic, old myocardial infarction	Number			Percent distribution		
Both sexes:						
All visits	244,522	37,171	207,351	100.0	100.0	100.0
No visits	39,337	4,798	34,538	16.1	12.9	16.7
1 visit	12,024	3,970	8,054	4.9	10.7	3.9
2–4 visits	43,842	8,151	35,692	17.9	21.9	17.2
5–14 visits	91,793	10,699	81,093	37.5	28.8	39.1
15 visits or more	57,528	9,553	47,975	23.5	25.7	23.1
Male:						
All visits	119,842	26,455	91,387	100.0	100.0	100.0
No visits	13,691	3,815	9,875	11.4	13.4	10.8
1 visit	7,640	3,631	*4,008	6.4	12.8	*4.4
2–4 visits	26,316	7,277	19,039	22.0	25.6	20.8
5–14 visits	45,356	7,710	37,646	37.8	27.1	41.2
15 visits or more	26,839	6,021	20,818	22.4	21.2	22.8
Female:						
All visits	124,681	8,716	115,965	100.0	100.0	100.0
No visits	25,646	*983	24,663	20.6	*11.3	21.3
1 visit	4,384	*339	*4,045	3.5	*3.9	*3.5
2–4 visits	17,526	874	16,653	14.1	10.0	14.4
5–14 visits	46,436	2,989	43,447	37.2	34.3	37.5
5 visits or more	30,688	3,532	27,157	24.6	40.5	23.4

[1]Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 9. Number and percent distribution of heart disease decedents by sex, according to age, type of health facility, and selected fo of heart disease: United States, 1986

Cause of death, type of health facility, and sex	All ages	25–64 years	65 years and over	All ages	25–64 years	65 y and
	Number			Percent distribution		
All forms of heart disease[1]						
Hospital or nursing home:						
Both sexes	564,694	82,494	482,200	100.0	100.0	100
Male	270,910	57,126	213,784	48.0	69.2	44
Female	293,784	25,368	268,416	52.0	30.8	56
Other health facility:						
Both sexes	18,154	3,031	15,123	100.0	100.0	100
Male	7,104	1,956	5,149	39.1	64.5	34
Female	11,050	*1,075	9,975	60.9	*35.5	66
Hospice:						
Both sexes	30,977	3,392	27,585	100.0	100.0	100
Male	14,735	*2,116	12,619	47.6	*62.4	45
Female	16,242	*1,276	14,966	52.4	*37.6	54
Ischemic:						
Hospital or nursing home:						
Both sexes	385,218	52,434	332,785	100.0	100.0	100
Male	190,830	38,892	151,937	49.5	74.2	45
Female	194,389	13,542	180,848	50.5	25.8	54
Other health facility:						
Both sexes	12,691	1,720	10,971	100.0	100.0	100
Male	5,162	*1,055	*4,107	40.7	*61.3	*37
Female	7,529	*665	6,864	59.3	*38.7	62
Hospice:						
Both sexes	20,964	2,053	18,911	100.0	100.0	100
Male	10,270	1,198	9,072	49.0	58.3	48
Female	10,694	*855	9,839	51.0	*41.7	52
Acute myocardial infarction:						
Hospital or nursing home:						
Both sexes	176,428	29,487	146,941	100.0	100.0	100
Male	97,376	22,606	74,770	55.2	76.7	50
Female	79,053	6,881	72,172	44.8	23.3	49
Other health facility:						
Both sexes	4,308	1,020	3,288	100.0	100.0	100
Male	*1,719	*644	*1,075	*39.9	*63.2	*32
Female	*2,589	*376	*2,213	*60.1	*36.8	*67
Hospice:						
Both sexes	7,795	1,044	6,751	100.0	100.0	100
Male	4,679	*635	*4,044	60.0	*60.8	*59
Female	3,116	*409	*2,707	40.0	*39.2	*40
Other ischemic, old myocardial infarction:						
Hospital or nursing home:						
Both sexes	206,379	22,368	184,011	100.0	100.0	100
Male	91,953	15,730	76,223	44.6	70.3	41
Female	114,425	6,638	107,787	55.4	29.7	58
Other health facility:						
Both sexes	8,384	701	7,683	100.0	100.0	100
Male	*3,443	*411	*3,032	*41.1	*58.7	*39
Female	4,941	*290	*4,651	58.9	*41.3	*60
Hospice:						
Both sexes	12,733	781	11,952	100.0	100.0	100
Male	5,374	*346	5,028	42.2	*44.3	42
Female	7,359	*435	6,924	57.8	*55.7	57

[1] Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 10. Number and percent distribution of heart disease decedents by major payment source, according to age, sex, and selected forms of heart disease: United States, 1986

Cause of death, sex, and major payment source	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
All forms of heart disease[1]	Number			Percent distribution		
Both sexes:						
All sources of payment	608,926	114,684	494,243	100.0	100.0	100.0
Self or family	78,906	15,352	63,554	13.0	13.4	12.9
Other family members	5,341	*1,040	*4,301	0.9	*0.9	*0.9
Medicare	308,793	16,322	292,471	50.7	14.2	59.2
Medicaid	54,935	8,102	46,834	9.0	7.1	9.5
HMO	112,409	56,883	55,526	18.5	49.6	11.2
Other sources	48,543	16,985	31,558	8.0	14.8	6.4
Male:						
All sources of payment	312,438	82,613	229,825	100.0	100.0	100.0
Self or family	36,495	11,287	25,208	11.7	13.7	11.0
Other family members	*1,798	*525	*1,274	*0.6	*0.6	*0.6
Medicare	151,585	10,824	140,761	48.5	13.1	61.2
Medicaid	18,722	4,707	14,015	6.0	5.7	6.1
HMO	71,023	41,775	29,248	22.7	50.6	12.7
Other sources	32,814	13,495	19,319	10.5	16.3	8.4
Female:						
All sources of payment	296,489	32,071	264,418	100.0	100.0	100.0
Self or family	42,411	4,065	38,346	14.3	12.7	14.5
Other family members	3,542	*516	*3,027	1.2	*1.6	*1.1
Medicare	157,208	5,498	151,710	53.0	17.1	57.4
Medicaid	36,214	3,394	32,819	12.2	10.6	12.4
HMO	41,386	15,108	26,278	14.0	47.1	9.9
Other sources	15,729	3,490	12,239	5.3	10.9	4.6
Ischemic						
Both sexes:						
All sources of payment	421,722	77,602	344,120	100.0	100.0	100.0
Self or family	55,407	10,728	44,680	13.1	13.8	13.0
Other family members	3,352	*539	*2,813	0.8	*0.7	*0.8
Medicare	219,632	11,351	208,281	52.1	14.6	60.5
Medicaid	33,881	4,363	29,518	8.0	5.6	8.6
HMO	80,868	40,809	40,059	19.2	52.6	11.6
Other sources	28,583	9,813	18,770	6.8	12.6	5.5
Male:						
All sources of payment	224,515	59,901	164,614	100.0	100.0	100.0
Self or family	28,086	8,269	19,817	12.5	13.8	12.0
Other family members	*1,085	*420	*665	*0.5	*0.7	*0.4
Medicare	110,161	7,965	102,196	49.1	13.3	62.1
Medicaid	12,253	2,872	9,381	5.5	4.8	5.7
HMO	52,650	31,767	20,883	23.5	53.0	12.7
Other sources	20,280	8,607	11,673	9.0	14.4	7.1
Female:						
All sources of payment	197,207	17,701	179,506	100.0	100.0	100.0
Self or family	27,322	2,459	24,863	13.9	13.9	13.9
Other family members	*2,267	*118	*2,149	*1.1	*0.7	*1.2
Medicare	109,471	3,386	106,085	55.5	19.1	59.1
Medicaid	21,628	1,490	20,137	11.0	8.4	11.2
HMO	28,218	9,042	19,176	14.3	51.1	10.7
Other sources	8,302	1,206	7,097	4.2	6.8	4.0

See footnotes at end of table.

Table 10. Number and percent distribution of heart disease decedents by major payment source, according to age, sex, and selected forms of heart disease: United States, 1986—Con.

Cause of death, sex, and major payment source	All ages	25–64 years	65 years and over	All ages	25–64 years	65 y and
Acute myocardial infarction	Number			Percent distribution		
Both sexes:						
All sources of payment	206,914	44,137	162,777	100.0	100.0	10
Self or family	26,254	6,618	19,636	12.7	15.0	1
Other family members	*986	*254	*732	*0.5	*0.6	*
Medicare	105,791	5,501	100,290	51.1	12.5	6
Medicaid	14,391	2,633	11,758	7.0	6.0	
HMO	47,073	24,190	22,884	22.8	54.8	1
Other sources	12,419	4,943	7,476	6.0	11.2	
Male:						
All sources of payment	119,169	33,673	85,496	100.0	100.0	10
Self or family	14,705	4,924	9,781	12.3	14.6	1
Other family members	*580	*170	*409	*0.5	*0.5	*
Medicare	56,779	4,523	52,256	47.6	13.4	6
Medicaid	6,321	1,820	*4,500	5.3	5.4	*
HMO	31,173	18,113	13,060	26.2	53.8	1
Other sources	9,612	4,122	5,490	8.1	12.2	
Female:						
All sources of payment	87,745	10,464	77,280	100.0	100.0	10
Self or family	11,549	1,693	9,855	13.2	16.2	1
Other family members	*407	*83	*323	*0.5	*0.8	*
Medicare	49,011	977	48,034	55.9	9.3	6
Medicaid	8,070	812	7,258	9.2	7.8	
HMO	15,900	6,077	9,823	18.1	58.1	1
Other sources	2,807	821	*1,986	3.2	7.8	*
Other ischemic, old myocardial infarction						
Both sexes:						
All sources of payment	210,426	31,750	178,676	100.0	100.0	10
Self or family	28,172	3,745	24,428	13.4	11.8	1
Other family members	*2,353	*272	*2,081	*1.1	*0.9	*
Medicare	112,511	5,816	106,696	53.5	18.3	5
Medicaid	19,219	1,730	17,488	9.1	5.4	
HMO	32,527	15,774	16,754	15.5	49.7	
Other sources	15,644	4,414	11,230	7.4	13.9	
Male:						
All sources of payment	102,007	24,669	77,339	100.0	100.0	10
Self or family	12,425	3,004	9,420	12.2	12.2	1
Other family members	*506	*250	*255	*0.5	*1.0	*
Medicare	52,698	3,431	49,267	51.7	13.9	6
Medicaid	5,719	*1,052	*4,667	5.6	*4.3	*
HMO	20,489	12,880	7,609	20.1	52.2	
Other sources	10,171	4,051	6,119	10.0	16.4	
Female:						
All sources of payment	108,419	7,082	101,337	100.0	100.0	10
Self or family	15,748	*741	15,007	14.5	*10.5	1
Other family members	*1,848	*22	*1,825	*1.7	*0.3	*
Medicare	59,813	2,385	57,428	55.2	33.7	5
Medicaid	13,500	678	12,822	12.5	9.6	1
HMO	12,038	2,894	9,144	11.1	40.9	
Other sources	5,473	*362	5,111	5.0	*5.1	

[1]Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding. HMO is health maintenance organization.

Table 11. Number and percent distribution of heart disease decedents by amount of own money spent for health care, according to age, sex, and selected forms of heart disease: United States, 1986

Cause of death, sex, amount of own money spent	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
	Number			Percent distribution		
All forms of heart disease[1]						
Both sexes:						
All amounts	616,813	116,439	500,374	100.0	100.0	100.0
Less than $500	271,814	61,041	210,774	44.1	52.4	42.1
$500–$999	94,963	19,167	75,797	15.4	16.5	15.1
$1,000–$1,999	72,352	13,549	58,803	11.7	11.6	11.8
$2,000–$4,999	91,018	14,801	76,217	14.8	12.7	15.2
$5,000 or more	86,665	7,881	78,784	14.1	6.8	15.7
Male:						
All amounts	318,984	83,336	235,648	100.0	100.0	100.0
Less than $500	146,293	45,447	100,846	45.9	54.5	42.8
$500–$999	54,509	13,216	41,292	17.1	15.9	17.5
$1,000–$1,999	40,109	9,707	30,401	12.6	11.6	12.9
$2,000–$4,999	43,705	10,062	33,644	13.7	12.1	14.3
$5,000 or more	34,368	4,903	29,465	10.8	5.9	12.5
Female:						
All amounts	297,828	33,103	264,725	100.0	100.0	100.0
Less than $500	125,521	15,594	109,927	42.1	47.1	41.5
$500–$999	40,455	5,950	34,504	13.6	18.0	13.0
$1,000–$1,999	32,243	3,841	28,402	10.8	11.6	10.7
$2,000–$4,999	47,313	4,740	42,573	15.9	14.3	16.1
$5,000 or more	52,297	2,978	49,319	17.6	9.0	18.6
Ischemic						
Both sexes:						
All amounts	427,302	80,138	347,163	100.0	100.0	100.0
Less than $500	192,271	44,255	148,015	45.0	55.2	42.6
$500–$999	66,193	11,698	54,494	15.5	14.6	15.7
$1,000–$1,999	51,436	9,139	42,297	12.0	11.4	12.2
$2,000–$4,999	58,871	9,591	49,280	13.8	12.0	14.2
$5,000 or more	58,532	5,454	53,077	13.7	6.8	15.3
Male:						
All amounts	229,203	60,604	168,599	100.0	100.0	100.0
Less than $500	108,945	34,656	74,289	47.5	57.2	44.1
$500–$999	38,794	8,658	30,136	16.9	14.3	17.9
$1,000–$1,999	29,276	6,908	22,368	12.8	11.4	13.3
$2,000–$4,999	28,366	6,775	21,591	12.4	11.2	12.8
$5,000 or more	23,822	3,606	20,216	10.4	6.0	12.0
Female:						
All amounts	198,099	19,534	178,565	100.0	100.0	100.0
Less than $500	83,326	9,599	73,727	42.1	49.1	41.3
$500–$999	27,399	3,040	24,359	13.8	15.6	13.6
$1,000–$1,999	22,160	2,231	19,929	11.2	11.4	11.2
$2,000–$4,999	30,505	2,816	27,689	15.4	14.4	15.5
$5,000 or more	34,710	1,848	32,861	17.5	9.5	18.4
Acute myocardial infarction						
Both sexes:						
All amounts	210,407	46,628	163,779	100.0	100.0	100.0
Less than $500	99,168	26,171	72,997	47.1	56.1	44.6
$500–$999	34,164	6,052	28,112	16.2	13.0	17.2
$1,000–$1,999	29,046	5,545	23,501	13.8	11.9	14.3
$2,000–$4,999	27,610	5,723	21,887	13.1	12.3	13.4
$5,000 or more	20,419	3,137	17,282	9.7	6.7	10.6
Male:						
All amounts	122,575	35,344	87,230	100.0	100.0	100.0
Less than $500	62,007	20,126	41,880	50.6	56.9	48.0
$500–$999	21,191	4,509	16,682	17.3	12.8	19.1
$1,000–$1,999	17,109	4,635	12,475	14.0	13.1	14.3
$2,000–$4,999	12,998	4,024	8,974	10.6	11.4	10.3
$5,000 or more	9,269	2,050	7,219	7.6	5.8	8.3
Female:						
All amounts	87,832	11,284	76,548	100.0	100.0	100.0
Less than $500	37,161	6,045	31,116	42.3	53.6	40.6
$500–$999	12,973	1,543	11,430	14.8	13.7	14.9
$1,000–$1,999	11,937	910	11,027	13.6	8.1	14.4
$2,000–$4,999	14,612	1,700	12,912	16.6	15.1	16.9
$5,000 or more	11,150	*1,087	10,063	12.7	*9.6	13.1

See footnotes at end of table.

Table 11. Number and percent distribution of heart disease decedents by amount of own money spent for health care, according to age, sex, and selected forms of heart disease: United States, 1986—Con.

Cause of death, sex, and amount of own money spent	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
Other ischemic, old myocardial infarction	Number			Percent distribution		
Both sexes:						
All amounts	212,883	31,762	181,121	100.0	100.0	100.0
Less than $500	90,413	16,760	73,652	42.5	52.8	40.7
$500–$999	31,557	5,453	26,105	14.8	17.2	14.4
$1,000–$1,999	22,390	3,594	18,795	10.5	11.3	10.4
$2,000–$4,999	30,631	3,651	26,980	14.4	11.5	14.9
$5,000 or more	37,893	2,305	35,588	17.8	7.3	19.6
Male:						
All amounts	103,474	23,690	79,785	100.0	100.0	100.0
Less than $500	44,802	13,287	31,515	43.3	56.1	39.5
$500–$999	17,216	4,040	13,176	16.6	17.1	16.5
$1,000–$1,999	12,167	*2,274	9,893	11.8	*9.6	12.4
$2,000–$4,999	14,944	*2,534	12,410	14.4	*10.7	15.6
$5,000 or more	14,346	*1,556	12,790	13.9	*6.6	16.0
Female:						
All amounts	109,409	8,073	101,336	100.0	100.0	100.0
Less than $500	45,611	3,474	42,137	41.7	43.0	41.6
$500–$999	14,342	*1,413	12,928	13.1	*17.5	12.8
$1,000–$1,999	10,223	*1,320	8,902	9.3	*16.4	8.8
$2,000–$4,999	15,686	*1,116	14,570	14.3	*13.8	14.4
$5,000 or more	23,547	*749	22,798	21.5	*9.3	22.5

[1] Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 12. Number and percent distribution of heart disease decedents by sex, according to age, type of assistance received, and selected forms of heart disease: United States, 1986

Cause of death, type of assistance received, and sex	*All ages*	*25–64 years*	*65 years and over*	*All ages*	*25–64 years*	*65 years and over*
	Number			Percent distribution		
All forms of heart disease[1]						
Assistance received in activities of daily living:						
Both sexes	214,009	23,436	190,574	100.0	100.0	100.0
Male	93,968	13,052	80,916	43.9	55.7	42.5
Female	120,041	10,383	109,658	56.1	44.3	57.5
Medical help received:						
Both sexes	235,945	29,536	206,409	100.0	100.0	100.0
Male	115,513	17,904	97,609	49.0	60.6	47.3
Female	120,432	11,632	108,800	51.0	39.4	52.7
Ischemic						
Assistance received in activities of daily living:						
Both sexes	140,409	12,883	127,526	100.0	100.0	100.0
Male	63,994	7,649	56,344	45.6	59.4	44.2
Female	76,415	5,233	71,182	54.4	40.6	55.8
Medical help received:						
Both sexes	158,304	16,775	141,530	100.0	100.0	100.0
Male	81,212	10,588	70,625	51.3	63.1	49.9
Female	77,092	6,187	70,905	48.7	36.9	50.1
Acute myocardial infarction						
Assistance received in activities of daily living:						
Both sexes	55,310	5,996	49,314	100.0	100.0	100.0
Male	27,341	3,507	23,834	49.4	58.5	48.3
Female	27,970	2,489	25,481	50.6	41.5	51.7
Medical help received:						
Both sexes	64,619	7,677	56,942	100.0	100.0	100.0
Male	36,269	5,328	30,941	56.1	69.4	54.3
Female	28,350	2,349	26,001	43.9	30.6	45.7
Other ischemic, old myocardial infarction						
Assistance received in activities of daily living:						
Both sexes	84,360	6,598	77,763	100.0	100.0	100.0
Male	35,987	3,925	32,061	42.7	59.5	41.2
Female	48,374	2,672	45,701	57.3	40.5	58.8
Medical help received:						
Both sexes	92,795	8,617	84,178	100.0	100.0	100.0
Male	44,064	4,790	39,274	47.5	55.6	46.7
Female	48,731	3,828	44,904	52.5	44.4	53.3

[1] Includes other categories of diseases of heart not included in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 13. Number and percent distribution of heart disease decedents by type of assistance received, according to age, sex, and selected forms of heart disease: United States, 1986

Type of assistance received, sex, and cause of death	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
Assistance in activities of daily living	Number			Percent distribution		
All forms of heart disease:[1]						
Both sexes—						
All types of assistance	610,436	134,654	475,782	100.0	100.0	100.0
No assistance received	398,692	111,446	287,246	65.3	82.8	60.4
Family only	111,129	14,932	96,196	18.2	11.1	20.2
Nonrelatives only	21,665	1,567	20,098	3.5	1.2	4.2
Family and nonrelatives	78,950	6,708	72,242	12.9	5.0	15.2
Male—						
All types of assistance	343,651	98,344	245,306	100.0	100.0	100.0
No assistance received	251,062	65,520	185,542	73.1	87.0	67.5
Family only	55,361	8,948	46,413	16.1	9.1	18.9
Nonrelatives only	6,101	*606	5,494	1.8	*0.6	2.2
Family and nonrelatives	31,127	3,270	27,857	9.1	3.3	11.4
Female—						
All types of assistance	266,785	36,309	230,476	100.0	100.0	100.0
No assistance received	147,630	25,926	121,704	55.3	71.4	52.8
Family only	55,767	5,984	49,783	20.9	16.5	21.6
Nonrelatives only	15,564	*960	14,604	5.8	*2.6	6.3
Family and nonrelatives	47,823	3,438	44,385	17.9	9.5	19.3
Ischemic:						
Both sexes—						
All types of assistance	424,514	91,899	332,615	100.0	100.0	100.0
No assistance received	285,951	79,244	206,706	67.4	86.2	62.1
Family only	73,406	8,506	64,900	17.3	9.3	19.5
Nonrelatives only	14,716	*386	14,330	3.5	*0.4	4.3
Family and nonrelatives	50,442	3,762	46,680	11.9	4.1	14.0
Male—						
All types of assistance	246,650	70,812	207,837	100.0	100.0	100.0
No assistance received	183,615	63,390	120,224	74.4	89.5	57.8
Family only	38,631	5,239	33,392	15.7	7.4	16.1
Nonrelatives only	*3,714	*157	*35,557	*1.5	*0.2	*17.1
Family and nonrelatives	20,689	2,025	18,665	8.4	2.9	9.0
Female—						
All types of assistance	177,865	21,087	156,777	100.0	100.0	100.0
No assistance received	102,336	15,854	86,482	57.5	75.2	55.2
Family only	34,774	3,267	31,508	19.6	15.5	20.1
Nonrelatives only	11,001	*229	10,773	6.2	*1.1	6.9
Family and nonrelatives	29,753	1,738	28,015	16.7	8.2	17.9
Acute myocardial infarction:						
Both sexes—						
All types of assistance	223,446	53,667	169,778	100.0	100.0	100.0
No assistance received	169,106	47,900	121,206	75.7	89.3	71.4
Family only	32,039	4,138	27,901	14.3	7.7	16.4
Nonrelatives only	*3,849	*96	*3,753	*1.7	*0.2	*2.2
Family and nonrelatives	18,452	*1,534	16,918	8.3	*2.9	10.0
Male—						
All types of assistance	135,928	41,142	94,786	100.0	100.0	100.0
No assistance received	109,350	37,863	71,487	80.4	92.0	75.4
Family only	17,349	2,405	14,944	12.8	5.8	15.8
Nonrelatives only	*1,428	*65	*1,343	*1.1	*0.2	*1.4
Family and nonrelatives	7,801	*789	7,011	5.7	*1.9	7.4
Female—						
All types of assistance	87,518	12,525	74,993	100.0	100.0	100.0
No assistance received	59,756	10,036	49,719	68.3	80.1	66.3
Family only	14,690	1,733	12,957	16.8	13.8	17.3
Nonrelatives only	*2,421	*11	*2,410	*2.8	*0.1	*3.2
Family and nonrelatives	10,652	*745	9,907	12.2	*5.9	13.2
Other ischemic, old myocardial infarction:						
Both sexes—						
All types of assistance	195,915	36,571	159,344	100.0	100.0	100.0
No assistance received	112,430	29,974	82,457	57.4	82.0	51.7
Family only	41,041	4,296	36,745	20.9	11.7	23.1
Nonrelatives only	10,867	*290	10,577	5.5	*0.8	6.6
Family and nonrelatives	31,577	2,011	29,566	16.1	5.5	18.6
Male—						
All types of assistance	106,981	28,176	78,805	100.0	100.0	100.0
No assistance received	71,190	24,251	46,940	66.5	86.1	59.6
Family only	21,029	2,835	18,194	19.7	10.1	23.1
Nonrelatives only	*2,286	*72	*2,214	*2.1	*0.3	*2.8
Family and nonrelatives	12,476	*1,018	11,458	11.7	*3.6	14.5
Female—						
All types of assistance	88,934	8,395	80,539	100.0	100.0	100.0
No assistance received	41,240	5,723	35,517	46.4	68.2	44.1
Family only	20,013	1,462	18,551	22.5	17.4	23.0
Nonrelatives only	8,580	*218	8,362	*9.6	2.6	10.4
Family and nonrelatives	19,101	*993	18,108	*21.5	11.8	22.5

See footnotes at end of table.

Table 13. Number and percent distribution of heart disease decedents by type of assistance received, according to age, sex, and selected forms of heart disease: United States, 1986—Con.

Type of assistance received, sex, and cause of death	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
Help in medical care	Number			Percent distribution		
All forms of heart disease[1]						
Both sexes—						
All types of assistance	608,841	134,209	474,630	100.0	100.0	100.0
No assistance received	375,179	104,760	270,418	61.6	78.1	57.0
Family only	130,048	19,787	110,261	21.4	14.7	23.2
Nonrelatives only	24,575	2,442	22,133	4.0	1.8	4.7
Family and nonrelatives	79,038	7,220	71,819	13.0	5.4	15.1
Male—						
All types of assistance	343,626	97,839	245,786	100.0	100.0	100.0
No assistance received	229,157	80,023	149,134	66.7	81.8	60.7
Family only	73,337	12,420	60,916	21.3	12.7	24.8
Nonrelatives only	7,618	*1,618	6,000	2.2	*1.7	2.4
Family and nonrelatives	33,514	3,778	29,736	9.8	3.9	12.1
Female—						
All types of assistance	265,215	36,370	228,844	100.0	100.0	100.0
No assistance received	146,022	24,738	121,284	55.1	68.0	53.0
Family only	56,711	7,366	49,345	21.4	20.3	21.6
Nonrelatives only	16,957	*824	16,133	6.4	*2.3	7.0
Family and nonrelatives	45,524	3,442	42,082	17.2	9.5	18.4
Ischemic:						
Both sexes—						
All types of assistance	423,486	91,227	332,259	100.0	100.0	100.0
No assistance received	266,768	74,540	192,228	63.0	81.7	57.9
Family only	88,955	11,423	77,532	21.0	12.5	23.3
Nonrelatives only	16,207	*1,101	15,105	3.8	*1.2	4.5
Family and nonrelatives	51,557	4,163	47,394	12.2	4.6	14.3
Male—						
All types of assistance	246,987	70,079	176,908	100.0	100.0	100.0
No assistance received	166,122	59,579	106,543	67.3	85.0	60.2
Family only	53,390	7,335	46,054	21.6	10.5	26.0
Nonrelatives only	4,679	*789	*3,890	1.9	*1.1	*2.2
Family and nonrelatives	22,797	2,376	20,421	9.2	3.4	11.5
Female—						
All types of assistance	176,499	21,148	155,351	100.0	100.0	100.0
No assistance received	100,646	14,961	85,685	57.0	70.7	55.2
Family only	35,565	4,088	31,477	20.2	19.3	20.3
Nonrelatives only	11,527	*312	11,215	6.5	*1.5	7.2
Family and nonrelatives	28,760	1,787	26,973	16.3	8.5	17.4
Acute myocardial infarction:						
Both sexes—						
All types of assistance	223,331	53,467	169,864	100.0	100.0	100.0
No assistance received	158,775	45,790	112,985	71.1	85.6	66.5
Family only	40,853	5,305	35,548	18.3	9.9	20.9
Nonrelatives only	4,892	*718	*4,174	2.2	*1.3	*2.5
Family and nonrelatives	18,811	*1,654	17,157	8.4	*3.1	10.1
Male—						
All types of assistance	136,044	40,954	95,090	100.0	100.0	100.0
No assistance received	99,838	35,626	64,212	73.4	87.0	67.5
Family only	25,206	3,577	21,630	18.5	8.7	22.7
Nonrelatives only	*2,116	*636	*1,480	*1.6	*1.6	*1.6
Family and nonrelatives	8,883	*1,116	7,767	6.5	*2.7	8.2
Female—						
All types of assistance	87,287	12,513	74,774	100.0	100.0	100.0
No assistance received	58,937	10,164	48,773	67.5	81.2	65.2
Family only	15,647	1,728	13,919	17.9	13.8	18.6
Nonrelatives only	*2,775	*82	*2,693	*3.2	*0.7	*3.6
Family and nonrelatives	9,928	*538	9,390	11.4	*4.3	12.6
Other ischemic, old myocardial infarction:						
Both sexes—						
All types of assistance	195,003	36,100	158,903	100.0	100.0	100.0
No assistance received	103,730	27,570	76,160	53.2	76.4	47.9
Family only	47,637	5,867	41,770	24.4	16.3	26.3
Nonrelatives only	11,315	*383	10,932	5.8	*1.1	6.9
Family and nonrelatives	32,321	2,279	30,041	16.6	6.3	18.9
Male—						
All types of assistance	107,203	27,631	79,572	100.0	100.0	100.0
No assistance received	63,422	22,929	40,493	59.2	83.0	50.9
Family only	27,730	3,519	24,211	25.9	12.7	30.4
Nonrelatives only	*2,563	*153	*2,410	*2.4	*0.6	*3.0
Family and nonrelatives	13,488	*1,030	12,458	12.6	*3.7	15.7
Female—						
All types of assistance	87,800	8,469	79,331	100.0	100.0	100.0
No assistance received	40,308	4,641	35,667	45.9	54.8	45.0
Family only	19,907	2,348	17,559	22.7	27.7	22.1
Nonrelatives only	8,752	*230	8,522	10.0	*2.7	10.7
Family and nonrelatives	18,833	*1,249	17,583	21.4	*14.8	22.2

[1] Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 14. Number and percent of heart disease decedents with other serious health problems, by age, other health problem, and selected forms of heart disease: United States, 1986

Cause of death, other health problem, and sex	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
	Number			Percent		
All forms of heart disease[1]						
High blood pressure:						
Both sexes	389,128	77,402	311,726	54.3	56.6	53.8
Male	188,040	55,348	132,693	50.6	55.7	48.8
Female	201,088	22,054	179,033	58.3	59.0	58.3
Stroke:						
Both sexes	198,520	22,530	175,990	27.2	16.4	29.7
Male	90,924	14,804	76,120	24.0	14.8	27.3
Female	107,596	7,727	99,870	30.5	20.5	31.7
Angina:						
Both sexes	156,997	29,656	127,341	23.0	23.0	23.1
Male	83,436	23,337	60,099	23.6	24.8	23.2
Female	73,560	6,318	67,242	22.4	18.0	22.9
Diabetes:						
Both sexes	156,160	31,474	124,686	21.1	22.6	20.8
Male	74,019	19,975	54,043	19.4	19.7	19.3
Female	82,141	11,498	70,642	22.9	30.5	22.1
Cancer:						
Both sexes	53,455	5,758	47,697	7.8	4.5	8.6
Male	23,850	3,690	20,160	6.8	3.9	7.9
Female	29,605	2,068	27,537	8.8	6.0	9.2
Asthma:						
Both sexes	44,220	10,442	33,778	6.0	7.5	5.7
Male	21,793	5,565	16,227	5.7	5.5	5.8
Female	22,427	4,876	17,551	6.3	13.0	5.5
Other lung conditions:						
Both sexes	121,536	22,302	99,237	16.6	16.3	16.7
Male	77,953	15,984	61,970	20.6	16.0	22.2
Female	43,585	6,318	37,267	12.3	17.0	11.8
Ischemic						
High blood pressure:						
Both sexes	271,290	53,600	217,690	54.9	57.5	54.2
Male	137,123	40,646	96,477	51.5	56.8	49.6
Female	134,168	12,955	121,213	58.8	60.0	58.7
Stroke:						
Both sexes	127,369	13,803	113,566	25.2	14.7	27.6
Male	61,100	9,734	51,366	22.5	13.5	25.8
Female	66,269	4,069	62,200	28.4	18.6	29.4
Angina:						
Both sexes	123,788	23,675	100,113	26.4	26.4	26.5
Male	65,641	19,393	46,248	26.2	28.1	25.4
Female	58,147	4,282	53,865	26.8	20.6	27.4
Diabetes:						
Both sexes	115,478	21,628	93,851	22.5	22.6	22.5
Male	56,008	14,231	41,777	20.4	19.3	20.8
Female	59,470	7,397	52,073	25.0	33.7	24.1
Cancer:						
Both sexes	36,705	3,609	33,096	7.7	4.0	8.6
Male	16,444	*2,311	14,133	6.5	*3.4	7.7
Female	20,262	1,298	18,963	9.1	6.2	9.4
Asthma:						
Both sexes	29,255	5,956	23,300	5.8	6.3	5.6
Male	14,693	3,307	11,386	5.4	4.5	5.7
Female	14,562	2,649	11,913	6.2	12.2	5.6
Other lung conditions:						
Both sexes	79,911	13,401	66,510	15.8	14.3	16.1
Male	50,922	9,784	41,138	18.8	13.5	20.6
Female	28,989	3,617	25,372	12.4	16.9	11.9
Acute myocardial infarction						
High blood pressure:						
Both sexes	137,803	31,019	106,784	56.6	57.9	56.3
Male	74,103	22,940	51,163	52.2	56.3	50.5
Female	63,700	8,080	55,621	62.8	63.0	62.8
Stroke:						
Both sexes	57,054	8,380	48,674	23.0	15.6	25.1
Male	30,090	5,800	24,293	20.9	14.1	23.6
Female	26,961	2,580	24,381	25.9	20.1	26.8

See footnotes at end of table.

Table 14. Number and percent of heart disease decedents with other serious health problems, by age, other health problem, and selected forms of heart disease: United States, 1986—Con.

Cause of death, other health problem, and sex	All ages	25–64 years	65 years and over	All ages	25–64 years	65 years and over
Acute myocardial infarction—Con.	Number			Percent		
Angina:						
Both sexes	62,692	12,544	50,148	27.4	24.9	28.1
Male	36,037	10,413	25,624	27.5	27.3	27.7
Female	26,655	2,131	24,524	27.2	17.6	28.6
Diabetes:						
Both sexes	62,385	12,266	50,119	24.8	22.6	25.5
Male	32,126	8,420	23,705	22.2	20.3	22.9
Female	30,260	3,846	26,414	28.6	29.9	28.4
Cancer:						
Both sexes	16,950	2,041	14,909	7.2	4.0	8.1
Male	7,303	*1,299	6,004	5.5	*3.4	6.3
Female	9,647	*742	8,905	9.5	*6.1	10.0
Asthma:						
Both sexes	12,348	3,566	8,782	4.9	6.6	4.5
Male	7,065	1,910	*5,155	4.9	4.7	*5.0
Female	5,283	1,656	*3,627	5.0	12.9	*3.9
Other lung conditions:						
Both sexes	35,965	6,964	29,001	14.5	13.1	14.9
Male	24,584	4,610	19,974	17.1	11.4	19.4
Female	11,380	2,354	9,026	10.8	18.6	9.8
Other ischemic, old myocardial infarction						
High blood pressure:						
Both sexes	131,449	21,899	109,551	53.4	57.5	52.7
Male	61,654	17,072	44,582	51.1	57.8	49.0
Female	69,795	4,826	64,969	55.7	56.4	55.6
Stroke:						
Both sexes	69,362	4,976	64,386	27.5	12.9	30.2
Male	30,111	3,487	26,624	24.4	11.8	28.3
Female	39,251	1,489	37,761	30.6	16.9	31.7
Angina:						
Both sexes	59,731	10,879	48,852	25.5	28.9	24.8
Male	28,655	8,728	19,926	24.6	29.9	22.9
Female	31,076	2,151	28,926	26.3	25.5	26.4
Diabetes:						
Both sexes	52,770	9,304	43,466	20.6	23.5	20.1
Male	23,849	5,776	18,072	19.0	18.9	19.1
Female	28,922	3,528	25,394	22.2	39.7	20.9
Cancer:						
Both sexes	19,277	*1,568	17,709	8.2	*4.2	8.9
Male	8,870	*1,012	7,859	7.7	*3.6	9.1
Female	10,407	*556	9,850	8.6	*6.5	8.8
Asthma:						
Both sexes	16,823	2,305	14,518	6.7	5.9	6.8
Male	7,617	*1,385	6,231	6.2	*4.6	6.6
Female	9,206	919	8,286	7.2	10.6	6.9
Other lung conditions:						
Both sexes	43,026	5,931	37,095	17.1	15.3	17.4
Male	25,697	4,740	20,957	20.7	15.7	22.3
Female	17,329	1,191	16,138	13.6	13.8	13.5

[1] Includes other categories of Diseases of heart not shown in this table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Table 15. Number and percent distribution of heart disease decedents by relative reported to have had heart attack, according to sex and selected forms of heart disease: United States, 1986

Cause of death and relative	Both sexes	Male	Female	Both sexes	Male	Female
All forms of heart disease[1]	Number			Percent distribution		
All relatives	568,399	303,742	264,657	100.0	100.0	100.0
No relatives	223,430	115,436	107,994	39.3	38.0	40.8
Mother only	36,808	22,397	14,411	6.5	7.4	5.5
Father only	57,044	36,831	20,213	10.0	12.1	7.6
Sister only	35,490	14,474	21,016	6.2	4.8	7.9
Brother only	88,246	47,985	40,261	15.5	15.8	15.2
Both parents only	11,913	7,830	4,083	2.1	2.5	1.5
Brother and sister only	21,131	10,180	10,951	3.7	3.4	4.1
Parent(s) and sibling(s)	94,337	48,610	45,728	16.6	16.0	17.3
Ischemic						
All relatives	397,603	221,557	176,047	100.0	100.0	100.0
No relatives	150,188	80,755	69,433	37.8	36.5	39.4
Mother only	25,802	17,153	8,649	6.5	7.7	4.9
Father only	39,268	26,595	12,674	9.9	12.0	7.2
Sister only	24,046	10,030	14,016	6.1	4.5	8.0
Brother only	64,778	37,682	27,096	16.3	17.0	15.4
Both parents only	7,067	4,626	2,441	1.8	2.1	1.4
Brother and sister only	15,175	7,445	7,731	3.8	3.4	4.4
Parent(s) and sibling(s)	71,278	37,271	34,007	17.9	16.8	19.3
Acute myocardial infarction						
All relatives	202,038	120,244	81,794	100.0	100.0	100.0
No relatives	74,077	45,168	28,910	36.7	37.6	35.3
Mother only	11,982	8,646	3,335	5.9	7.2	4.1
Father only	21,542	15,103	6,438	10.7	12.6	7.9
Sister only	13,091	5,446	7,645	6.5	4.5	9.4
Brother only	32,141	19,509	12,632	15.9	16.2	15.4
Both parents only	4,454	3,150	*1,304	2.2	2.6	*1.6
Brother and sister only	7,337	*3,519	*3,818	3.6	*2.9	*4.7
Parent(s) and sibling(s)	37,414	19,702	17,712	18.5	16.4	21.7
Other ischemic, old myocardial infarction						
All relatives	191,618	98,559	93,060	100.0	100.0	100.0
No relatives	75,317	35,047	40,270	39.3	35.6	43.3
Mother only	13,525	8,211	5,314	7.1	8.3	5.7
Father only	17,255	11,240	6,015	9.0	11.4	6.5
Sister only	10,760	*4,389	6,371	5.6	*4.5	6.9
Brother only	31,328	17,133	14,196	16.4	17.4	15.3
Both parents only	2,614	*1,476	*1,138	1.4	*1.5	*1.2
Brother and sister only	7,838	*3,925	*3,913	4.1	*4.0	*4.2
Parent(s) and sibling(s)	32,982	17,139	15,843	17.2	17.4	17.0

[1] Includes other categories of Diseases of heart not shown in the table.

NOTE: Oregon not included in the 1986 National Mortality Followback Survey. Numbers may not add to totals because of rounding.

Technical notes

Sources of data and sample design

The NMFS sample was selected from the Current Mortality Sample (CMS). This is a systematic 10-percent sample of all deaths in the Nation, received each month by the 50 States, the District of Columbia, and the independent registration area of New York City and transmitted to the National Center for Health Statistics (10). Oregon was not included in the 1986 NFMS because of respondent consent requirements. Thus, these data are representative of deaths in the United States excluding Oregon. Oregon accounts for 1.1 percent of all deaths in the United States: There is little variation in this percent by age among Oregon deaths.

Oversampling by race and age was done to permit the study of race differentials in mortality and the characteristics of persons who die at a younger age. Approximately 2,500 death certificates were selected with certainty. These included all women in the CMS 25–54 years of age and all men 35–64 years of age who died from ischemic heart disease, all deaths from asthma, rare cancer deaths, and all deaths of American Indians, Aleuts, and Eskimos. In addition, deaths for persons under 55 years of age were oversampled 3.1 times and deaths for black persons were oversampled 2.9 times. Death certificates in the CMS that were eligible for the 1986 NMFS were sequentially assigned to one of 18 sampling strata. The strata formation was based on the decedent's age, sex, race, and cause of death. For the 1986 NMFS, questionnaires were mailed by the U.S. Bureau of the Census about 6 months after the death to the next-of-kin or person listed on the death certificate as providing the personal information on the decedent's death certificate. A reminder letter was mailed 10 days after the first mailing, followed by a second mailing 1 month after the first mailing. Telephone or personal visits were made by Census interviewers to nonrespondents 1 month after the second mailing.

Eighty-two percent of the respondents who completed the NMFS questionnaire were a close relative—either the spouse, parent, sibling, or adult child—of the decedent. Only 6 percent of the respondents were nonrelatives. The response rate was 89 percent, yielding 16,598 completed questionnaires.

Information on age, race, sex, underlying and multiple cause-of-death data for each decedent was obtained from the Mortality Vital Statistics Multiple Cause-of-Death Statistical File compiled by NCHS. Multiple cause-of-death data provide information on diseases that are a factor in death whether or not they are the underlying cause of death (11). Records from the 1986 multiple cause-of-death file were matched to the data from the NMFS informant questionnaire for each decedent in the survey. The overall match rate was 99.9 percent.

Comparisons of numbers of deaths from the vital statistics registration system and the 1986 NMFS suggest that the counts of deaths are similar. For example, the NMFS weighted data for heart disease deaths yield a total of 759,431 deaths, compared with 765,490 for the vital statistics system file. Although the final weights applied to the NMFS adjust for differential sampling by race, sex, and age, no adjustment was made for cause of death. Hence, NMFS counts of death by cause will not necessarily equal counts obtained from the vital statistics file.

Estimation procedures

Probability sampling allows the NMFS data to be weighted to produce national estimates for the United States except for Oregon. It also allows approximation of the sampling error.

The NMFS sampling weights are prepared by a poststratified ratio estimation procedure. The sampling weight for each sample decedent is based on a product of the following three component weights.

1. Probability of selection. The basic weight for each sample decedent is the reciprocal of its probability of sample selection.
2. Adjustment for nonresponse. In an attempt to reduce nonresponse bias, the NMFS sampling weights are adjusted for nonresponse (with the exception of Oregon). This adjustment was implemented within subsets of the sampling strata and was the reciprocal of the response rate within the subset. This adjustment reduces nonresponse bias to the extent that data for a nonrespondent are similar to data for respondents in these adjustment classes. No adjustment was made for the exclusion of Oregon from the survey.
3. Poststratification by age, sex, and race. Within 18 poststrata defined by decedent age, sex, and race (see table I), the NMFS estimates were ratio adjusted to counts for the number of deaths reported to the National Vital Registration System for the United States, excluding Oregon. This adjustment makes the sample more representative of the target population by age, sex, and race.

Sampling errors and rounding of percents

Because the statistics presented in this report are based on a sample, they may differ from figures that would have been obtained if a complete census of all death certificates for decedents aged 25 and over had been taken using the same questionnaire, instructions, and procedures. The standard error of an estimate is primarily a measure of the variability that occurs when only a sample of population, rather than the total population, is surveyed. The standard error also reflects part of the measurement error, but it does not measure any systematic biases in the data. The chances are about 95 in 100 that an estimate from the sample differs from the value that would be obtained from

Table I. Parameters used to approximate the relative standard errors for estimates based on the 1986 National Mortality Followback Survey, by domain of study

Domain of study	Parameters	
	A	B
All decedents	–.000088	173.472799
Decedents 25–34 years of age	–.000725	40.250787
Decedents 35–54 years of age	–.000306	57.187500
Decedents 55–69 years of age	–.000325	189.139047
Decedents 70–84 years of age	–.000219	200.749692
Decedents 85 years of age and over	–.000430	181.208646
All black decedents	–.000250	57.315899
Black decedents 25–34 years of age	–.002721	36.923295
Black decedents 35–54 years of age	–.001278	48.883512
Black decedents 55–69 years of age	–.000863	64.860422
Black decedents 70–84 years of age	–.000688	59.820841
Black decedents 85 years of age and over	–.001911	54.630073
All other decedents	–.000106	184.663690
Other decedents 25–34 years of age	–.000948	39.640859
Other decedents 35–54 years of age	–.000419	62.024668
Other decedents 55–69 years of age	–.000411	214.015461
Other decedents 70–84 years of age	–.000253	211.433987
Other decedents 85 years of age and over	–.000484	190.261795

a complete census by less than twice the standard error.

Standard error for aggregate estimates—The approximate standard error of an estimated number of decedents with a particular characteristic, x, is calculated by

$$\mathrm{RSE}(x) = \sqrt{A + (B/x)}$$

and

$$\mathrm{SE}(x) = x \cdot \mathrm{RSE}(x)$$

where x = estimated number of decedents

A,B = parameters from table I

$\mathrm{RSE}(x)$ = relative standard error of x, and

$\mathrm{SE}(x)$ = standard error of x

The parameters shown in table I were estimated by a balanced-repeated-replication procedure using 20 replicate half samples. This method estimates the standard errors for survey estimates through observation of variability of estimates based on replicate half samples of the total sample. A description of the development and evaluation of the replication technique for error estimation has been published (12,13).

Samples of 100 NMFS aggregate estimates were selected from domains defined by the decedents' age and race. Each sample was used to calculate parameters for a generalized variance function.

Numbers and percents within the tables and text were rounded to the nearest whole number or tenth of a percent. Therefore, the estimates may not add to the totals.

NOTE: Nine other Federal agencies signed interagency agreements with NCHS to cosponsor the 1986 survey. These agencies are the National Heart, Lung and Blood Institute; the National Institute of Child Health and Human Development; the National Cancer Institute; the National Institute of Aging; the National Institute of Mental Health; the Health Care and Financing Administration; the U.S. Department of Veterans Affairs; the Indian Health Service; and the Office of the Assistant Secretary for Planning and Evaluation in the Department of Health and Human Services.

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